

Idaho Naturalist news

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The Idaho Naturalist News is a quarterly newsletter of the Idaho Master Naturalist Program.

Edited by Linda Kahn and Sara Focht

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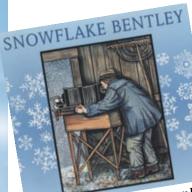


VOLUME 3 ISSUE

JANUARY 5, 2011

Wilson A. Bentley Showed us Snow!

Sara Focht, Idaho Master Naturalist Program Coordinator



I was recently asked to teach a preschool class about snowflakes. What more is there to know besides their six lovely sides and that no two of them are the same? As I looked for a children's book with which to open my lesson, I discovered a wonderful book called Snowflake Bentley. This book is a story of the first man to ever

photograph an individual snowflake thus discovering they all have 6 sides and are never alike!

Wilson Bentley (1865-1931) was born on a farm in rural Vermont. He was given a microscope as a gift at age 15 and began drawing snowflakes that he saw. Frustrated that he could not complete the drawing before the snowflake melted, he attached a bellows camera and successfully took his first photograph of a snowflake in 1885. Bentley photographed over 5000 snow crystals in his lifetime and later went on to publish articles in popular magazines about them.

There is a lot more to know about snowflakes than I thought, and I can thank a lot of what we know about them to Wilson A. Bentley.



"Under the microscope, I found that snowflakes were miracles of beauty; and it seemed a shame that this beauty should not be seen and appreciated by others."

—Wilson A. Bentley









Wilson A. Bentley never did copyright his images, but we thank him nonetheless!

The Vegetarian

Lierre Keith

Book Review

Manon Gaudreau, Wood River Valley Master Naturalist

The Vegetarian Myth: food, justice, and sustainability by Lierre Keith

You can read this book from the perspective of nutrition, morality, or politics. Plus be wowed by the author's writing style which is engaging and delightful. I bought the book for my dietary interest in a study done by a vegan feminist turned into a meat eater. But after avidly devouring this book I realized that the neo-Master-Naturalist in me got its share of satiety!

I had already read the book *The Omnivore's Dilemma* by Michael Pollan which studies our relationship with the plant and animal species we ingest, and his enquiries on the impact of our meals on the environment.

Lierre's goes at it deeper and from many different perspectives. She is making clear statements

and substantiates them with a multitude of quotes, studies and geological and historical facts. As you can hear in her book tour talk video on YouTube http://www.youtube.com/watch?v=4oOsLOotrRw&feature=player_embedded: "The nature of Nature, and the nature of Agriculture are completely at odds; one is against the other. You take a piece of land, clear every living thing off it, down to the bacteria, and then you plant it to human use. This is biotic cleansing. Problem number one is you displace any number of living creatures. And 'displace' is a nice word for extinction. Problem number two is you are destroying the top soil which is the basis of life."

In her quest for sustainability, the author shares her thought process and dilemmas about eating and growing food. Even on a small scale, gardening 'displaces' slugs, and

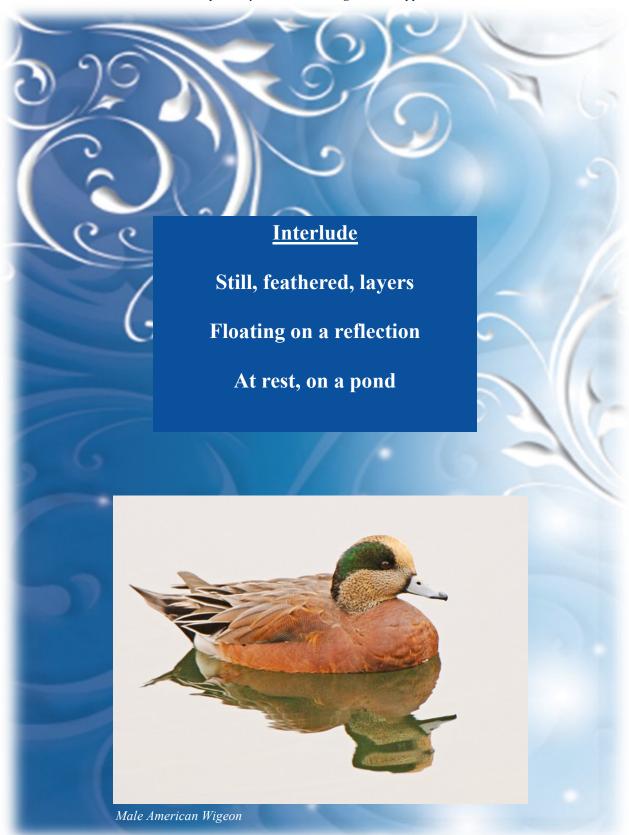
disrupts bacterial activity of the top soil. Lierre explains how deciding how to fertilize her garden was excruciating. Using bone meal and blood meal was against her moral values of not harming any animal. But using chemical fertilizers became an even worse solution. Buying food from local producers or the grocery stores also contributes to environmental damage and death of animals, insects, plants, micro-organisms in some way or other. Other living 'beings' must die to sustain our own life. And we must die too for other species to survive. The ecology cycle of the food chain includes returning the phosphorus of your human bones back to the soil.

The book demonstrates and concludes that a diet based on animal flesh (protein and saturated fat) is more sustainable than eating grains and plant-based carbohydrates. Moreover, these animals must feed themselves grazing native grasses, rather than being served grains (this excludes factory farming); these animals nourish the soil with their droppings and their decomposing blood and bones. The food we eat ought to be from a local source. The only sustainable source of water is rain or naturally occurring surface water, as pumping water from the water table to the surface creates salt deposits which eventually destroys the life of the top soil. The author urges us to only eat what grows naturally in our own local food shed with natural rain moisture.

The Vegetarian Myth is actually not primarily about what we eat or should eat, but about how our food is produced and how our choices of food affects the sustainability of our environment and of our whole planet. The reader gains much awareness of our real global food foot print and the survival needs of the various species, including our human race. You will never again turn a blind eye on your choices and responsibilities. A must read for all Master Naturalists.

POETRY CORNER

Poem and photo by Robert Ellis, Sagebrush-steppe Master Naturalist



Snowflakes, Animal Tracks & Theme Gardens

Kevin Laughlin, Sagebrush-steppe Master Naturalist

There's no such thing as bad weather, only inappropriate clothing. So put on your winter woollies, grab family and friends and get outside. Walking outdoors is a great way to get kids to notice how nature hunkers down for the cold season. Contact with nature reduces stress, promotes physical and emotional well-being and has even been shown to boost cognition—people actually think more clearly after a hike in the fresh air.

Catch snowflakes on your mittens and look at all the shapes. Other easy suggestions for enjoying nature in winter: make a snow angel, build a snow fort, or look for animal tracks in the snow. More wintertime outside ideas can be found at the www.beoutsideidaho.org. Check out the 101 things to do outside in winter on the following page.

When you come in from the outdoor fun, over some warm coco, or around the kitchen table, make some time to plan next year's garden with your children. Grab garden seed catalogs, your favorite gardening books, check out some key internet sites, and think about a Theme Garden for 2011. Could you plant a sensory, fairy, pizza, tea party or native Idaho garden? Could telling your family stories related to gardening be fun during the process? Garden activities keyed to children's interests, will go a long ways toward a lifetime of gardening pleasure with themes' they create and memories planted. Between snowstorms and outside hikes, this is a great classroom, afterschool, garden club, or Scout activity that teaches planning to children so that they can see results in planting. Key the size and scope of the theme project to the ages of the children. Think about intended goals (nutrition, project completion, fun, etc.) and related classroom activities, i.e. science, math, art and literature that can be connected to the theme. Your time, budget, and space constraints are important issues to talk about. Consider growing season, light, water, and personal preferences. Let the children cut out suitable pictures from old magazines or seed catalogues and attach these illustrations to a theme garden design. Have fun and look out for the joy this will create!

Here are six ideas. There are thousands more. Let the children's imagination run and then go for it!

- **ABC Kinder-Garten**—A is for alyssum and Z is for Zinnia. Using All American Selection Award winners (annuals, perennials, vegetables, herbs, etc).
- **Asian-American Garden**—Select plants that were introduced to Idaho by Asian immigrants. For example 'stir fry' plants including bok choy, snow peas, Chinese cabbage, yard long beans, and Japanese okra.
- **Butterfly Garden**—Shaped like a butterfly, children walk on the 'body.' Plants that butterflies love are displayed here. The wings can be in continuous bloom from May through October. Buddleia, Coneflower and Asters are a few examples.
- **Cereal Bowl Garden**—Plants found in the morning cereal bowl are grown here: corn for Cornflakes, oats for oatmeal, rice for Rice Krispies, wheat for Wheaties, and buckwheat for pancakes.
- **Teddy Bears & Animal Garden**—Create topiary bears stuffed and planted with several ivy or creeping plant cultivars. The planter bed can be filled with plants that have animal names: lamb's ears, spider plants, snapdragons.
- Three Sisters Garden—Celebrates Native American use of beans, corn, and squash in a variety of cultural traditions from across the Americas.

Reference

56 Children's' Theme Gardens: http://4hgarden.msu.edu/tour/overview.html Gardening Ideas: http://www.cln.org/themes/gardening.html

Junior Master Gardeners: http://www.jmgkids.us/

Kids gardening: http://www.kidsgardening.org/

Plants & Gardening: http://www.cumbavac.org/Gardening.htm
ThemeGardens: http://aggie-horticulture.tamu.edu/kindergarden/nutrition/schoolgardens/startagarden/themes.html



There's no such thing as bad weather, only inappropriate clothing. So put on your winter woollies, grab family and friends and get outside. Walking outdoors is a great way to get kids to notice how nature hunkers down for the cold season. Contact with nature reduces stress, promotes physical and emotional Use twigs or string to make a "maze" well-being and has even been shown to boost cognition - people actually think more clearly after a hike in the fresh air. Here are some easy suggestions for enjoying nature in winter:

Make a snow angel. Build a snow fort.

Have a snowball fight.

Build a snowman.

Take a walk and look for animal tracks. Play tag or hide and seek.

Go sledding.

Shovel snow.

Build an igloo.

Put out suet and birdseed for birds.

Wrap in a big blanket and sit on a swing. Go bird watching.

Do a winter scavenger hunt.

Collect pine cones to make wreaths and decorations.

Watch the sunset.



Look for bird nests in trees.

Draw pictures or take photos of trees in winter.

Go ice skating.

Rnd a small hill and "otter slide" down on your belly.

in your backyard.

Drink hot chocolate outside.

Lick an icicle.

Catch a snowflake in your mouth. Pull something in a wagon or sled.

Go for a nature walk.

Visit a nature center or nearby park.

Lay on the ground and look at clouds.

Draw shapes or write words in the snow.

Make a neighborhood map.

Decorate a tree in your yard.

Watch for animals - squirrels, deer, birds.

Have a winter pionic.

Make a winter nature journal.

See how many plants you can find in winter. Make a list of trees in your neighborhood.

Play "Simon Says" outside.

Go out at night to see the stars.

Look at holiday lights and displays.

Go snowshoeing.

Go on a guided nature hike in winter.

See what the river looks like in winter.

Catch snowflakes and look at them with a magnifying glass.

Make a snow sculpture.

Melt a snowball and see how much water it holds.

Take an avalanche awareness course with your family.

Listen to the local weather and go outside to experience rain, snow or the wind

Check out a SNOTEL site to see how much snow has fallen in different parts of the state.

Take a walk under the full moon. Go cross-country skiing.

Count snowflakes on your mittens.

Follow animal tracks.

Look for squirrel nests.

Draw winter trees.

Photograph winter scenes.

Listen to the sound of falling snow. Look for shooting stars at night.

Take a walk in the falling snow.

Use a ruler to measure snow

in your backyard.

www.beoutsideidaho.org



Mountain Bike Trail Mapping

Alan Crockett-Upper Snake Master Naturalist

In 2008, the Caribou-Targhee National Forest revised the travel plan for the Big Hole subsection. Cross-country travel by mountain bikes was prohibited. Much of the mountain biking in the Kelly Canyon area near Idaho Falls had taken place on user-defined trails which, with the revised travel plan, became off limits. Biking was restricted to roads, ATV trails and two very short non-motorized trails totaling about 0.6 miles. North of the Kelly Canyon area managed by the Forest Service there is a large section of State Lands which is open to cross country motorized travel. These State Lands had not been investigated by local mountain bikers.

To aid mountain bikers, I compiled a draft map of the State Lands showing roads and trails. I then rode and GPSed the trails and evaluated them for biking. Most of the ATV trails were great, easy mountain biking trails, but were seldom used. There was a maze of roads and ATV trails, as well as cow paths (not shown on maps). A crew of volunteers cleared miles of cow paths for single track trail riding and several demo rides were organized to introduce local riders to the area. The local mountain bike club provided members with copies of the map as changes were made. The latest map, with recommended routes, is posted on the Idaho Alpine Club website www.idahoalpinclub.org under the heading Local Trail Maps, Kelly Canyon. I have also made trail maps of several ranger districts on the Caribou Targhee National Forest posted on their website, and over 250 maps for the Idaho Department of Parks and Recreation as posted on their website.



Alan Crockett with his GPS equipment.



Glenn DeVoe-Upper Snake Master Naturalist

After joining the Upper Snake Chapter of Master Naturalists, I teamed with several others to perform surveys for nesting ferruginous hawks under the guidance of BLM wildlife biologist, Theresa Mathis. The ferruginous hawk, presently a species of concern to land and wildlife managers is a large open country bird that inhabits grassland, shrub-steppe and



deserts of North America. As a former range conservationist with BLM, I was very familiar with the high desert west of Idaho Falls and jumped at the chance to return to the two-track desert roads in search of nesting activity.

One of the reasons I fell in love with Idaho's high desert was its huge variety of plants and animals. Every trip out there is a special experience and a bonanza of photographic opportunities.

Ferruginous Hawk Chick peeks out from nest. Photo courtesy Glenn DeVoe.

Enter your 2010 hours today!

I really do mean TODAY!! Please!

Just a friendly reminder to have ALL your 2010 training and volunteer hours recorded by February 1, 2011 at the very latest!

WHY?

2010 totals will be calculated and turned in to Idaho Department of Fish and Game.

Volunteer hours may be used to calculate match for grants...your hours help leverage \$\$ for the agencies for which you volunteer!

Questions? Email Sara Focht Sara.focht@idfg.idaho.gov

Why we Count Birds at Silver Creek Preserve

Poo Wright-Pullium-Wood River Valley Master Naturalist

It's dark outside and I wonder to myself, "Do I really have to get up this early?" I can hear the coffee brewing—thank goodness—as I stumble into the kitchen for a cup. I'm not a morning person. So, how did I become so involved with the birds?

When I was asked to help get Silver Creek Preserve dedicated as an Important Bird Area (IBA) I was thrilled and honored. I had been birding at Silver Creek for a number of years; it's my favorite spot. I was also in the middle of taking a class called "Master Birders" started by Kent Fothergill. One of the conditions for taking the class was to start a bird project, set it up and maintain it for the duration of the class. It also needed to be set up so that it could easily be done by someone else should we need to pass it on. Perfect! Silver Creek became my project, but I was quickly joined by my three birding buddies, Dave Spaulding, Kathleen Cameron and Jean Seymour.

We met with Colleen Moulton from the Idaho Department of Fish and Game to learn where the count would be done. The process is called a *point count* which means you stand in one place for ten minutes, count the birds you see and then move to the next point. There are about ten points and originally we were only supposed to count the water birds but we knew well that there were many other birds that inhabited the area. We got on our way and now submit every bird we see (yes, every one of them) once a month, rain or snow or glorious sunshine.

Fast forward to 2010. The Idaho Master Naturalist Program is in its second year and I am extremely excited about finally getting to join the first year's participants. I was already spending as much time as possible outside learning what I could on my own or taking one-day seminars and home courses, but now—now I was going back to school! I didn't have this desire for nature when I was young although I was an artist and preferred painting nature to anything else. I guess my desire was first lured by my art, lying in wait for just the right time when this program came along. I already knew about birds and wildflowers but now it was *all* open to me. I don't think there was a single boring class in the course. Everything we learned was interesting. I have three words for the program: absorb, absorb, absorb!

Our first count at Silver Creek Preserve was in June of 2004. Pass it on to someone else? I don't think so. Or, maybe after ten years. Here's why. Visualize a tiny Yellow Warbler darting in and out of a bush near the creek's edge and listen as you hear the hatchings chirping for their dinner. Watch a fledgling brown-headed Cowbird quiver on a branch begging for food when who should show up to feed it but a beautiful Common Yellowthroat (one of its host species), a shocking event to watch happen considering the fledging is usually much bigger than the host parent. (Cowbirds make no nest of their own but lay their eggs in other species' nests for them to raise.) Hear the cacophony of Yellow-headed Blackbirds, Rails and Ducks as the marsh awakens with the dawn. See the sun rise gold, pink, and purple over Oueen's Crown.

Continued on next page

As Dave puts it, "It's such a tough job, to get up in the dark and cold and then see the sunrise, a 4x5 buck, the birds. It's truly a magical time to watch the area come alive." Having the opportunity to experience a deeper connection to the cycle of the seasons and the interconnectedness of all living beings is extremely meaningful to Kathleen. Jean is an early riser and just enjoys every moment possible with the birds and wildlife, compiling everything she sees whether it's counting at Silver Creek, banding birds for the Idaho Bird Observatory, or just going out for a jaunt. (Jean will be taking the 2011 IMN class.) For me it's a time for serenity . . . and amazement. I call it the "wow factor" because I can't find the words to express it. I often find myself just standing there and all that comes from my lips is a long, slow "wwwwwoooowwww!" We do it for science and the birds, but we get back more. Much more. With the Idaho Master Naturalist Program anyone can join this type of adventure. For me, now with absorption complete, I'll get to count my hours!







Above-Silver Creek Preserve by Poo Wright-Pullium Far Left-Yellow-headed Blackbird by Kathleen Cameron Left: Common Yellowthroat by Kathleen Cameron

Horns vs. Antlers

Sara Focht, Idaho Master Naturalist Program Coordinator

Santa's Reindeer have come and gone! A reindeer's (caribou) most prominent feature is their antlers! Antlers and horns show up on all sorts of mammals from the big racks of the elk to the curly Qs of the bighorn sheep. *But antlers and horns are not the same!*

Bison, pronghorn and bighorn sheep have *horns*. All horns are like *sleeves* that fit over a bony inside. Horns are made of a tough fiber-like material called keratin, like our fingernails and hair. Horns are grown by both males and females, though the horns often vary between sexes.

Animals with *antlers* are all members of the deer family. Antlers, unlike horns, are *bones* that grow out of the animal's head and only on the males (with the exception of caribou). Antlers grow under a thin skin rich in blood vessels (velvet). If antlers are damaged while the velvet is still on, an animal can lose a lot of blood. By fall, the velvet falls of, revealing beautiful bony antlers! Antler size is important! The larger the antler rack, the more likely the males will be able to fight off other males to gain rights to breed with a group of females.



Upper left: Caribou with velvet antlers. Lower left: Bull elk with antlers.

Upper right: Pronghorn male with horns.

Pronghorns are the only animal to lose their horns annually and grow them back.

Lower right: Male bighorn sheep with horns.

High School Students Pursue Master Naturalist Certification

Kris Ablin-Stone, Sagebrush-steppe Master Naturalist

Two Borah high school students (Boise) are pursuing Master Naturalist Certification. Anna Cafferty, a junior at Borah, started volunteering last spring. She has helped out at several Second Saturdays sponsored by the Foothills Learning Center, including the most recent one, "Green Christmas." She has also helped monitor the water quality of the Boise River by participating in the "Boise River Watershed Watch" program sponsored by the Watershed Environmental Center and band owls near CJ Strike for the BLM.

Siena Fox, also a junior at Borah, started volunteering this past fall. She has spent time working in the school gardens harvesting potatoes and at Green Christmas sponsored by Foothills Learning Center. She also spent an evening with the Golden Eagle Audubon Society hoping to observe the capture and banding of Saw-Whet Owls at the Idaho Bird Observatory.



Anna Cafferty helps band owls at CJ Strike Reservoir.



Siena Fox helps three young children with an activity at the Green Christmas event over the holiday season at the Foothills Learning Center in Boise. This annual event helps people make gifts and décor for the holidays in a sustainable way.

Kris Ablin-Stone (author) is a 2008 Sagebrush-steppe Master Naturalist and a biology teacher at Borah High School. She is offering the IMNP to her students as part of their biology class. Students must seek out volunteer opportunities on their own and complete 40 hours of service.

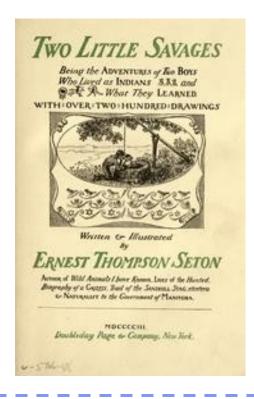
Book Review

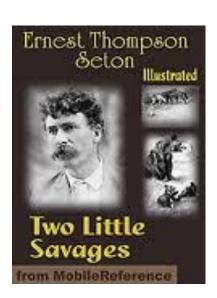
Tim McNeil, Sagebrush-steppe Master Naturalist

Two Little Savages by Ernest Thompson Seton (copyright 1903)

While a teenager I came upon the book *Two Little Savages*. It is the story of Yan, a sickly townboy sent to live with his country cousin, Sam, for the summer. Yan was fascinated by the natural world but his previous exposure had been limited to the mounted animals in the taxidermist window. Suddenly a new world is opened to him as Yan and Sam camp in a teepee near the farm pond. From neighbors and new friends they learn about tracking, wildlife, trees, and medicinal plants. They build bows and arrows and generally live like Indians.

The author, Ernest Thompson Seton, later explained he had chosen to write an adventure, rather than a how-to manual, to make it fun and readable. Seton was one of the founders of the boy Scouts of America and was principal author of the first Boy Scout Handbook in 1910. He served as Chief Scout for several years. In an age when Americans were fascinated with nature, Seton wrote and illustrated a great number of wildlife books. He has been a tremendous influence in my own life and sparked my enthusiasm for history, natural history, Native Americans, and the outdoors.





Track Survey Update

Mary Van Fleet, Henry's Fork Master Naturalist and Roger Piscitella, Upper Snake Master Naturalists

As mentioned in the fall, 2010 newsletter, the Henry's Fork and Upper Snake Chapters are participating in a study of elk and moose migration from Island Park to wintering grounds in Sand Creek, Idaho. The purpose of the study is to see where large ungulates are crossing Hwy 20 during migration, and using this information to mitigate animal casualties from highway crossing. The IMNs participating in the track surveys for this study include Collette Olsen, Errol Mobley, Julie Wemple, Ken Olson, Leslie Piscitella, Richard Peterson, and Tony Appelhans from the Upper Snake Chapter; and Dalene Root, Jeff Dufault, Lee King, Phyllis King, Melissa Hinckley, Nancy Olson, and Nancy Williams from the Henry's Fork Chapter. This study is being conducted by Nicholas Sharp, Wildlife Biologist with Wildlife Conservation Society and Ph.D. candidate at UM, and sponsored by IDFG. Much of this article was taken from Nick's monthly report to IDFG and participating volunteers.

In November, IMNs from both chapters were "standing by" to conduct roadside track surveys for elk and moose along stretches of Hwy 20 in Island Park. With no snow on the ground, there was concern that migration would get a late start, and surveys were delayed. IDFG observations by Josh Rydalch (IDFG) at Sand Creek WMA confirmed that animals were not yet arriving.

The first snow finally came, and the first surveys were conducted the week of Nov 13-18th. IMNs covered 26 miles of Hwy 20, while Nick, with help from Renee Seidler (WCS) and Wesley Sarmento (UM student), did an additional 24 miles. The second survey for tracks was scheduled to be done one week later, but alas, Mother Nature didn't have that plan. We went from almost no snow to blizzard conditions. Roads were closed in Island Park for almost three days. The amount of snow dumped made surveys nearly impossible. Brainstorming, IMN Errol Mobley (Upper Snake Chapter) took the initiative to survey the southern 20 miles of Hwy 20 from his vehicle. Given the snow conditions, moose and elk tracks were readily visible from the highway, and the vehicle survey was a legitimate alternative to collect data. IMNs Lee and Phyllis King (Henry's Fork Chapter) took to their car to complete the survey for the northern half of the highway, and the track surveys were called complete for the fall season. Through both surveys, the data collection recorded 119 points of moose or elk tracks along the highway.

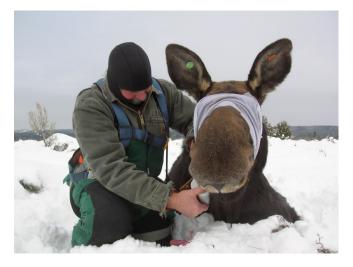
The heavy early snow also plagued plans for IDFG to capture animals for collaring. Originally scheduled to begin December 16th, IDFG biologists Shane Roberts and Mark Hurley scrambled to advance the capture schedule, fearing deep snow had driven the animals from their transitional range down to winter range at Sand Creek, where they would co-mingle with animals that did not cross Hwy 20 during migration. Captures were moved up to December 3rd, right after flight safety training class at the IDFG Idaho Falls regional office. Reconnaissance flights scheduled to take place prior to captures were also blocked by the weather, and first day of helicopter availability was lost to bad weather. With two days remaining, IDFG personnel were finally able to get in the air. IDFG biologists Josh Rydalch and Tony Imthurn guided recon flights in the helo- and fixed-wing, respectively. To IDFG's dismay, they found that all the elk had left the transition range and headed for winter grounds. All was not lost, as Tony found several animals, radio-collared in a previous study, that were known to have crossed Hwy 20. With that information, IDFG crews took to the air in sub-freezing weather to conduct captures. At the end of two days, IDFG managed to capture thirty elk and six moose, an impressive feat.

Currently, plans are to capture another nine moose when the helicopter is available in mid-December (fifteen total). Later in the winter, IDFG will try for another fifteen moose that live within the Island Park caldera year round. The study will continue with spring 2011 migration track surveys (this time looking for travel across the highway from west to east) and information obtained from the collared animals as they migrate back to Island Park. Stay tuned for more progress reports on this exciting study.

Thanks go to Nicholas Sharp who provided this monthly update of study activities, and to all of the IDFG personnel who conduct such dangerous and awesome work to help support this and other research studies: Bob Hawkins (Sky Aviation), Paul Atwood, Cindy Austin, Mark Drew, Curtis Hendricks, Mark Hurley, Tony Imthurn, Jim Juza, Daryl Meiints, Hollie Miysaki, John Nelson, Shane Roberts, Josh Rydalch, Jessie Thiel.





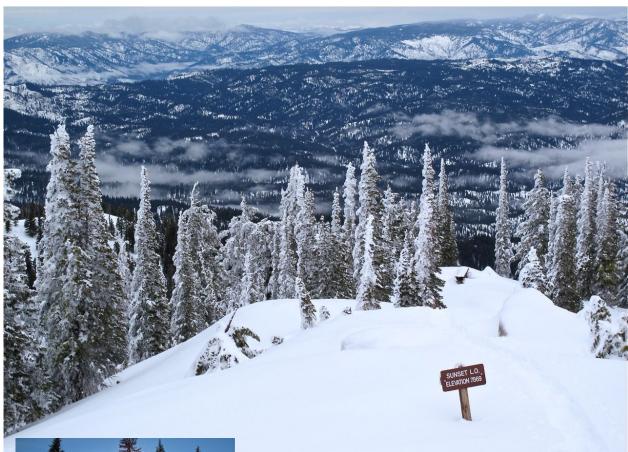






For this project, IDFG biologists fly winter range and either shoot a tranquilizer dart (for moose) or a net (for elk) to immobilize the animal for collaring. The helicopter lands and collaring crews hop out to do their work. Biologists listed clockwise from upper left: Daryl Meintz,, Mark Hurley, Mark Hurley, and Cindy Austin.

Photo Gallery





Sagebrush-steppe Chapter 2011 Master Naturalist Advanced Training Dates

February 8th
March 8th
April 12th
May 17th

All meetings are at the MK Nature Center

Winter photos by Sue Brirnbaum, Sagebrush-steppe Master Naturalist. For more information about the advanced training opportunities, contact Leah Cruz at leah@sellinag.com.